

WHAT IS CLAIMED IS:

1           1.           A pistol with lockable manual safety mechanism lock comprising:  
2           a frame;  
3           a hammer pivotally mounted to the frame;  
4           a sear engageable with the hammer, the sear operable to hold the hammer in a  
5           cocked position and further to release the hammer from the cocked position to  
6           discharge the pistol;  
7           a manual safety movable into and out of engagement with the sear, the safety  
8           when engaged with the sear to prevent the sear from moving and releasing the hammer  
9           while held in the cocked position by the sear; and  
10          a locking member movable from an unlocked position in which the safety is  
11          freely movable, to a locked position in which the locking member engages the safety so  
12          that the safety cannot freely move and is locked into engagement with the sear while the  
13          hammer is held in the cocked position by the sear.

1           2.           The pistol of claim 1, wherein the locking member is movable in a  
2           lateral direction between the locked and unlocked positions.

1           3.           The pistol of claim 1, wherein the safety further comprises a locking  
2           surface and the locking member further comprises a complimentary configured engaging  
3           surface, the locking surface meshing with the engaging surface when the locking member is in  
4           the locked position.

1           4.           The pistol of claim 3, wherein the engaging surface is concave and the  
2           meshing locking surface is convex.

1           5.           The pistol of claim 1, further comprising a housing to carry the locking  
2           member, the locking member movable in the housing and recessed within the housing when in  
3           the unlocked position, and the locking member protruding outward from the housing to engage  
4           the safety when in the locked position.

1           6.           The pistol of claim 5, wherein the locking member is rotatably carried by  
2           the housing and movable in a lateral direction between the locked and unlocked positions.

1           7.           The pistol of claim 6, wherein the locking member has external threads  
2 and the housing has an internally-threaded passageway to rotatably receive the locking  
3 member.

1           8.           The pistol of claim 7, wherein the threaded passageway is oriented  
2 transversely in the pistol and the locking member is movable in a lateral direction between the  
3 locked and unlocked positions.

1           9.           The pistol of claim 6, further comprising a spring-loaded detent plunger  
2 and wherein the locking member has a shaft configured to engage the plunger, the plunger  
3 biased toward and engaging the shaft so that the locking member resists rotation unless  
4 manually rotated by a pistol user.

1           10.          The pistol of claim 9, wherein the shaft includes at least one flat surface  
2 to engage a complimentary flat surface on the detent plunger.

1           11.          The pistol of claim 1, wherein the locking member is operated with a key  
2 by a user to move the locking member between the locked and unlocked positions.

1           12.          A pistol with lockable manual safety mechanism lock comprising:  
2           a frame;  
3           a hammer pivotally mounted to the frame;  
4           a sear engageable with the hammer and having a protrusion, the sear operable to  
5 hold the hammer in a cocked position and further to release the hammer from the  
6 cocked position to discharge the pistol;  
7           a lever movable into and out of engagement with the sear, the lever having a  
8 hook to engage the sear protrusion and a locking surface, the lever when engaged with  
9 the sear preventing the sear from moving and releasing the hammer while held in the  
10 cocked position by the sear; and  
11          a rotatable lock pin having an engaging surface, the lock pin movable in a lateral  
12 direction by a pistol user to mesh the engaging surface with the locking surface of the  
13 lever,

14 wherein the safety may be locked into engagement with the sear while the  
15 hammer is held in the cocked position by the sear to prevent the sear from releasing the  
16 hammer.

1 13. The pistol of claim 12, wherein the locking surface of the lever is  
2 concave and the engaging surface of the lock pin is convex.

1 14. The pistol of claim 12, wherein the lock pin is laterally oriented and  
2 threadably disposed in the frame such that rotating the lock pin in opposite directions laterally  
3 moves the lock pin with respect to the frame both into and out of engagement with the lever.

1 15. The pistol of claim 14, further comprising a key having an end  
2 configured to engage a complimentary-configured recess in the lock pin, the key useable by the  
3 pistol user to rotate the lock pin and lock the lever into engagement with the sear.

1 16. The pistol of claim 13, wherein the lock pin further comprises a shaft  
2 having a diameter and two ends, and a first radially-protruding cylindrical flange disposed on  
3 one end of the shaft, the flange having a diameter larger than the diameter of the shaft, the  
4 flange including the engaging surface disposed thereon.

1 17. The pistol of claim 16, further comprising a housing having an internally  
2 threaded passageway and the flange having external threads to engage the threaded  
3 passageway, the lock pin movable from a first lateral position in which the lock pin is recessed  
4 within the housing to a second lateral position in which the lock pin protrudes outward from the  
5 housing to engage the safety.

1 18. The pistol of claim 17, further comprising a detent plunger biased into  
2 contact with the lock pin shaft, and the lock pin further comprising a second radially-protruding  
3 cylindrical flange disposed on the other end of the shaft and spaced apart from the first flange,  
4 the plunger trapped between the two flanges to prevent the lock pin from being laterally  
5 unthreaded and removed from the housing without disassembling the pistol.

1 19. The pistol of claim 12, further comprising a key configured to engage  
2 the lock pin and useable by a pistol user to move the lock pin.

1 20. A method of locking a manual safety mechanism for a pistol comprising:

2 cocking a hammer that is pivotally mounted in a pistol frame to strike a firing  
3 pin;  
4 engaging the cocked hammer with a rotatable sear to hold the hammer in  
5 position, the sear being rotatable to release the hammer to strike the firing pin;  
6 engaging the sear with a movable manual safety to prevent the sear from  
7 moving to release the cocked hammer; and  
8 locking the manual safety into engagement with the sear to prevent discharging  
9 the pistol.

1 21. The method of claim 20, wherein the step of locking the manual safety  
2 into engagement with the sear is preceded by a step that comprises rotating a lock pin into  
3 engagement with the manual safety.

1 22. The method of claim 20, wherein step of locking the safety into  
2 engagement with the sear is preceded by steps comprising:  
3 rotating a lock pin disposed in the frame; and  
4 moving the lock pin laterally into engagement with the manual safety.